

# Needlestick Injuries in Nursing Homes

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# Aims

- aim of the study
  - explore causes and circumstances of needlestick injuries in nursing homes
- field implications
  - increase risk awareness
  - propose appropriate preventive measures

# Methods

- April 2002 – December 2007
- 45 nursing homes (4050 employees)
- East-Flanders region
- standardized registration
  - causes and circumstances sharp injuries
- 162 needlestick injuries

# Standardized registration

- self-developed registration form
  - occupation
  - age
  - seniority
  - date and hour
  - detailed description of accident (open-ended question)
  - immediate cause (multiple choice)
  - causal device (multiple choice)

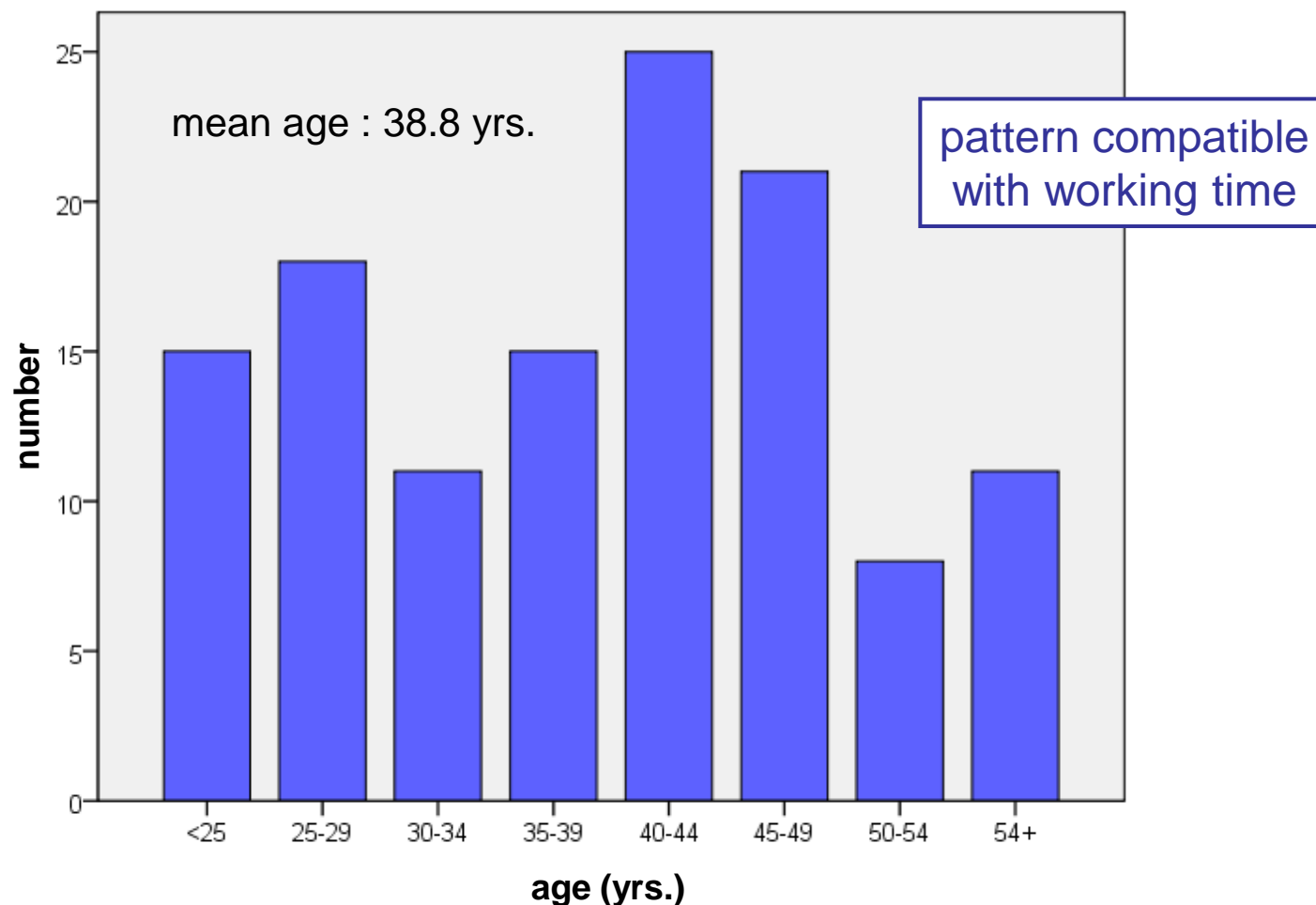
# Immediate causes

- needle left behind
- recapping
- related to a sharps-disposal container
- unexpected abrupt movement of the patient
- routine act (i.e. no unexpected event or apparent risk behavior)

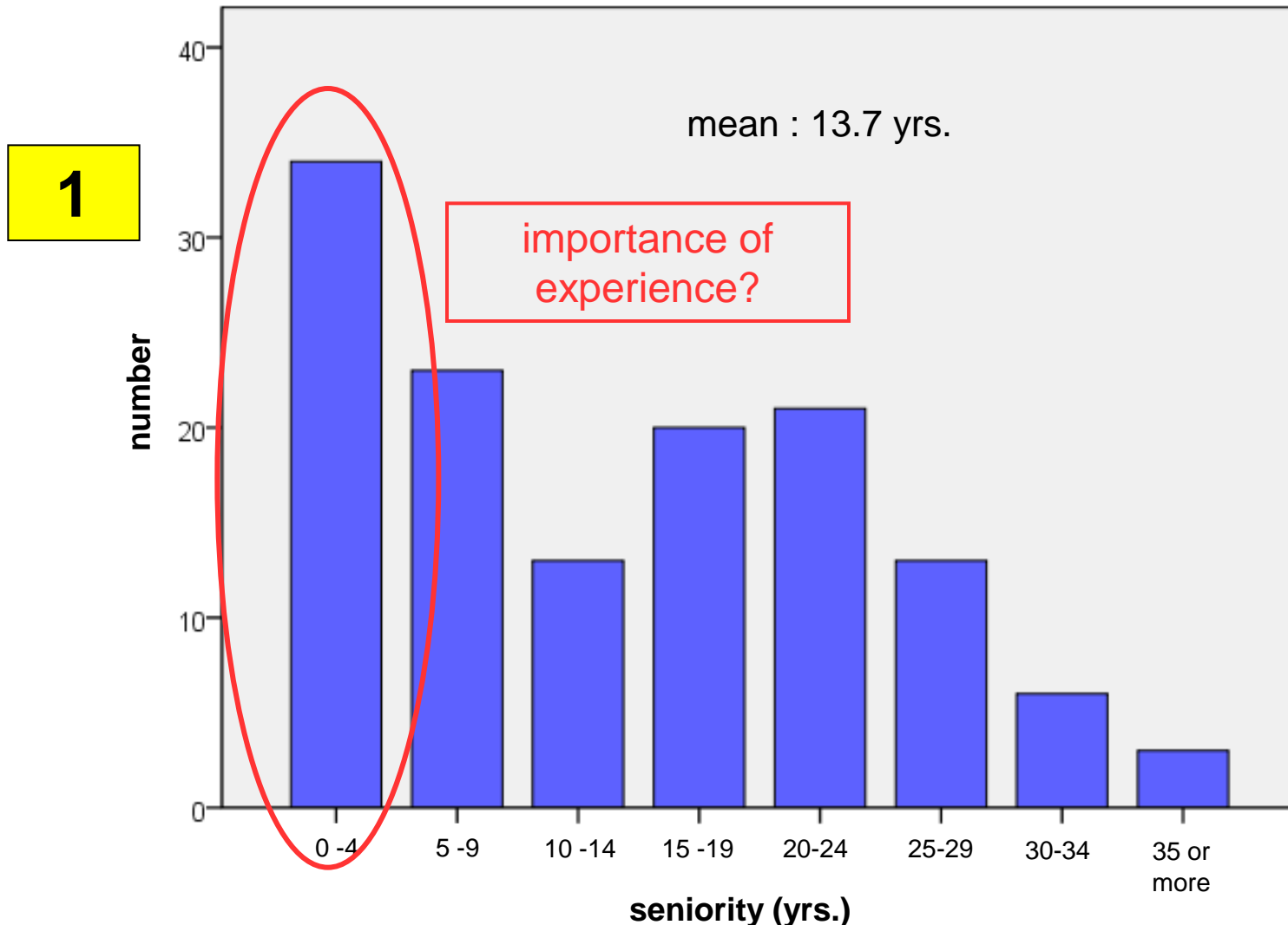
# Routine act

- venous blood draw
- insertion of intravenous catheter
- intradermal, subcutaneous, or intramuscular drug administration
- use of insulin pen
- finger stick for glycemia assessment

# Needlestick injuries and age

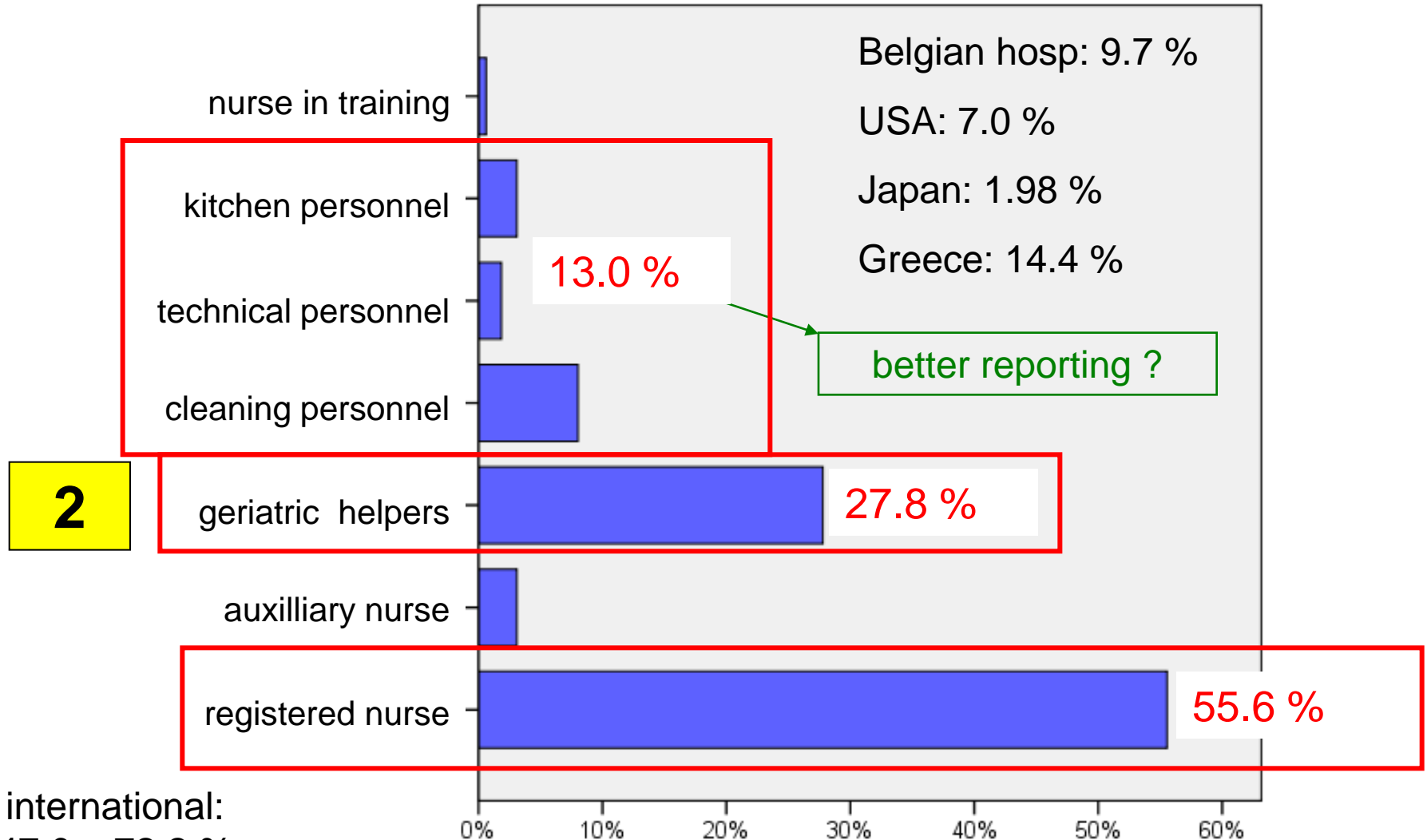


# Needlestick injuries and seniority



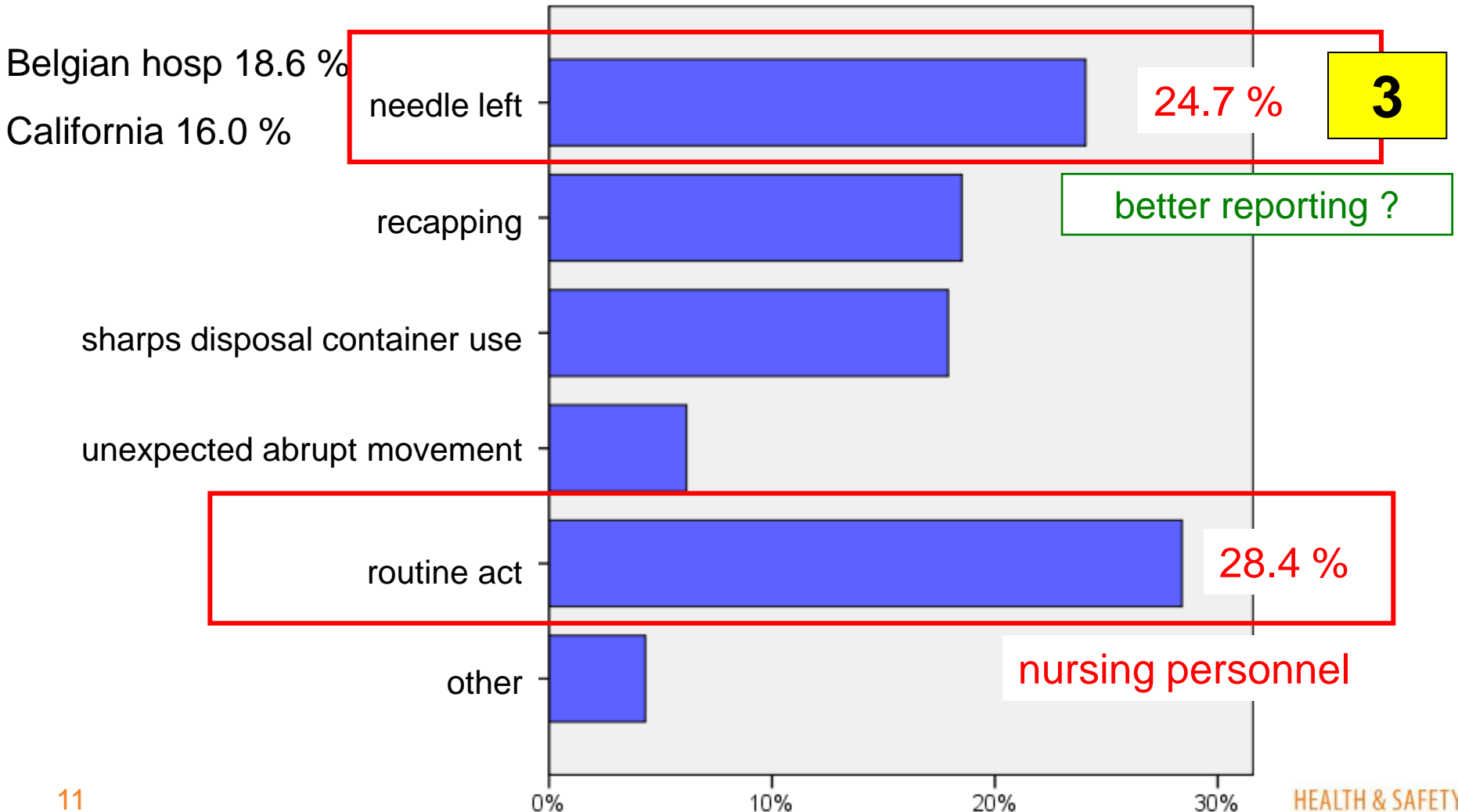


# Needlestick injuries and occupation

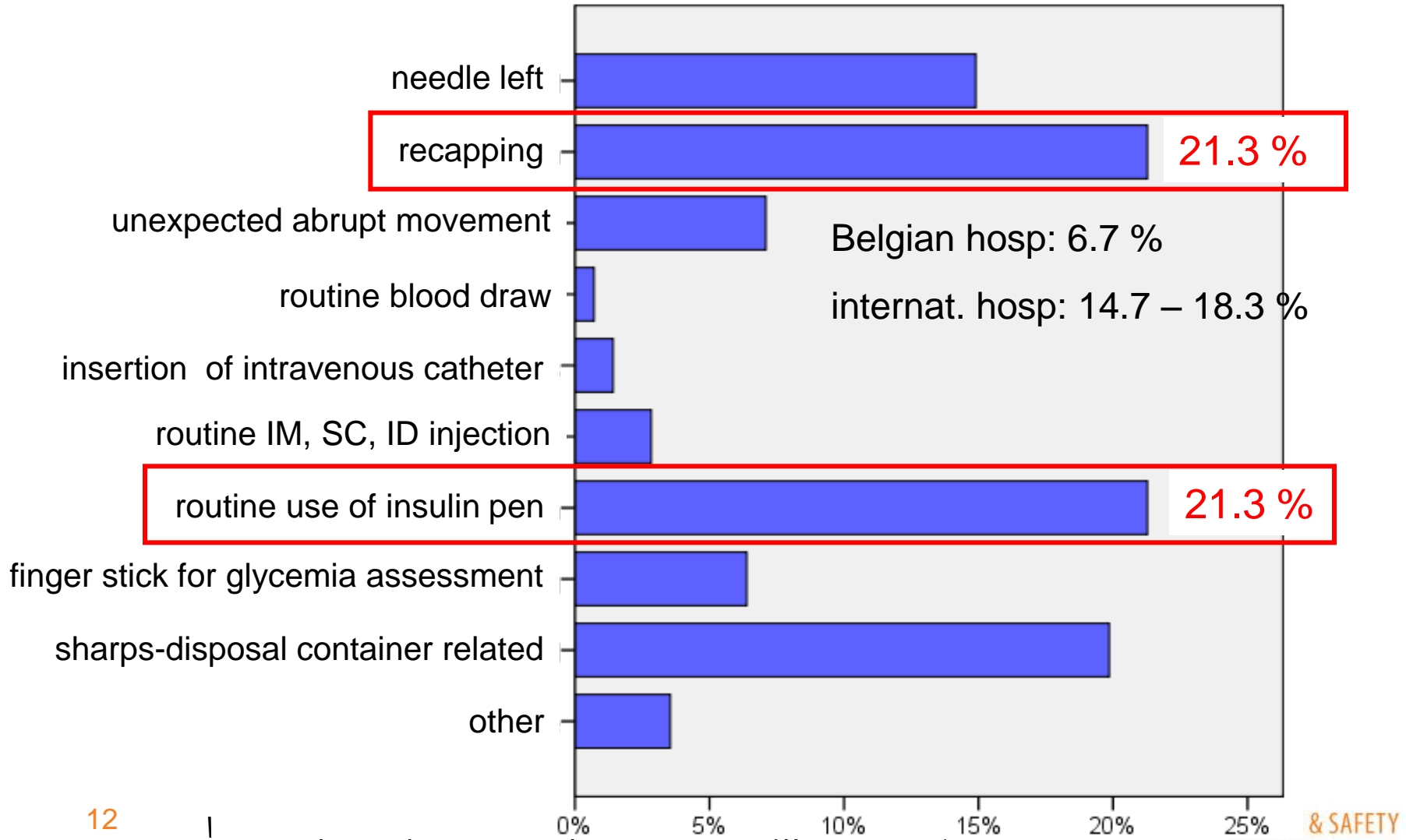


international:  
47.0 – 72.2 %

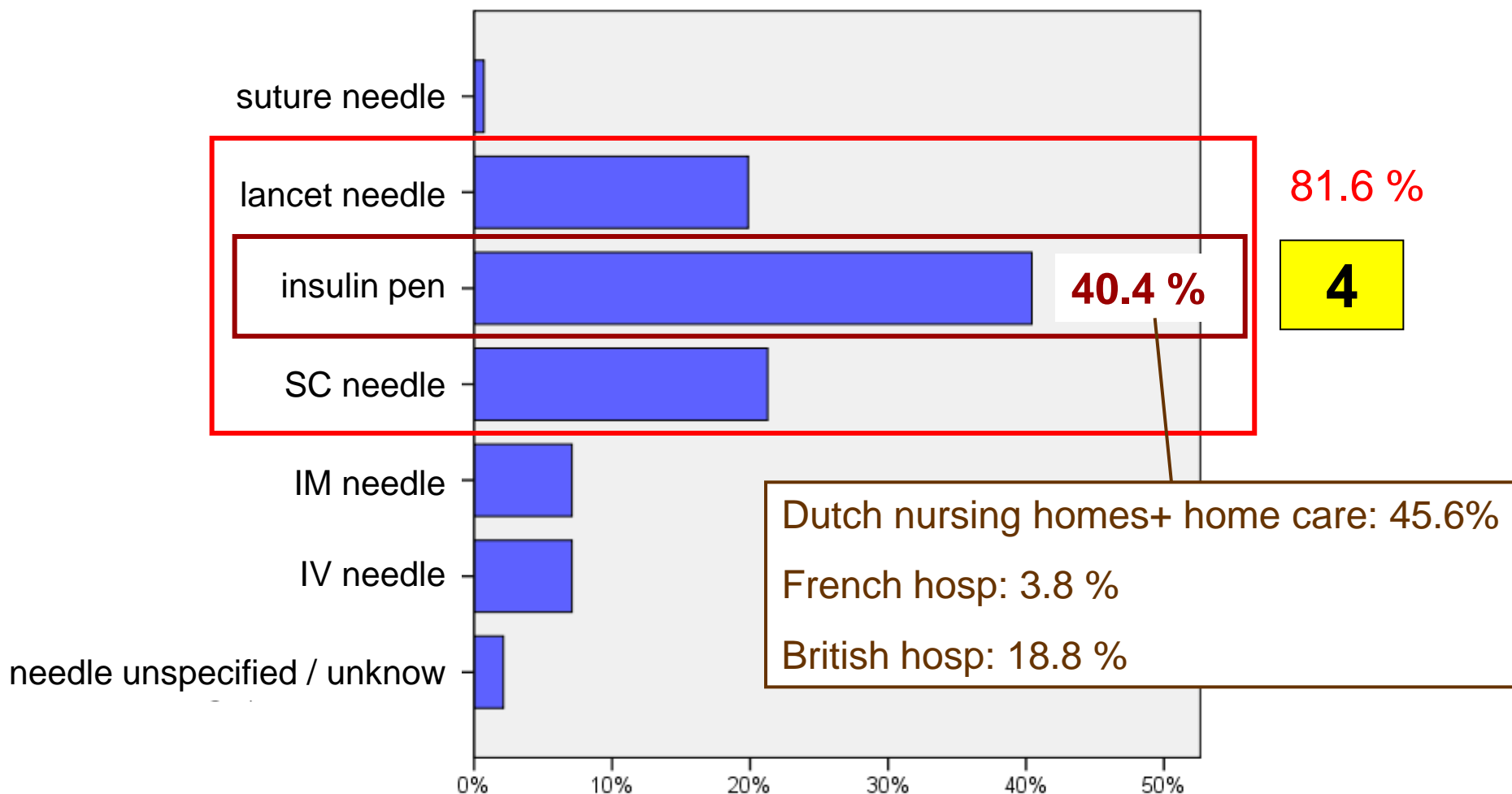
# Immediate cause (all needlestick injuries)



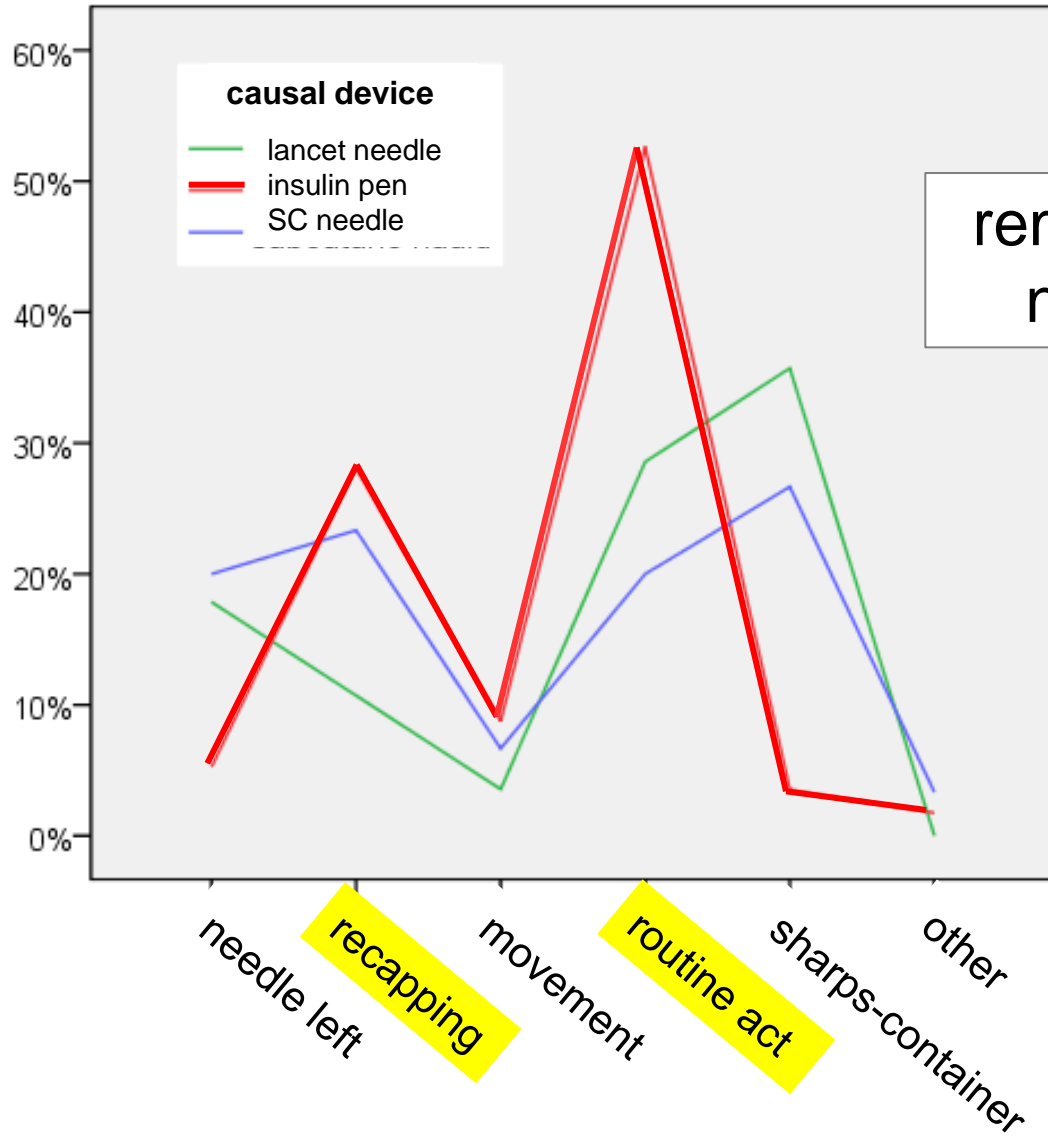
## for nursing personnel (n=141)



# Causal device in nursing personnel



# Immediate cause by causal device



**insulin pen**

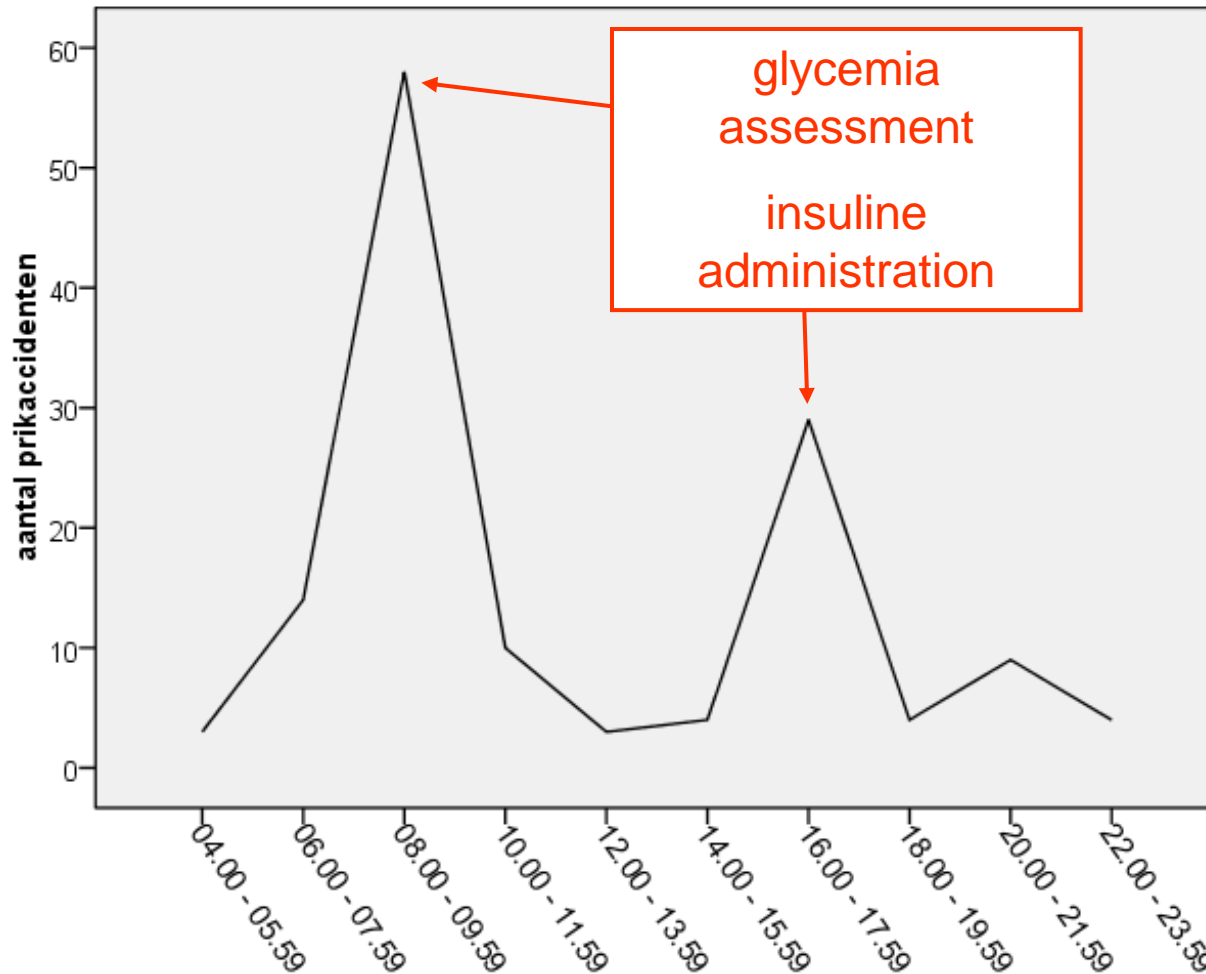
removal of  
needle

several times  
same needle for  
same patient

**= recapping**

**considered as  
routine act**

# Time distribution



# Main conclusions

- worker groups
  - starters
  - geriatric helpers
- causes
  - needles left behind
  - insulin pens

# Preventive measures (1)

- rigorous training of starters
- special attention for preventive measures in geriatric helpers
- elimination of needles left behind
  - increasing risk awareness and sense of responsibility on the part of the needle- and sharps-handling personnel (including GP's)
  - more defined sharps disposal–container policy
  - reporting left needles



## Preventive measures (2)

- prevention of injuries from insulin pens
  - use of classic syringes\*
  - self-administration by residents\*
  - cautious handling
  - prevention of recapping
    - use of adapted sharps-disposal containers\*
    - protective pen designs\*

*\* Edwards et al 2005*